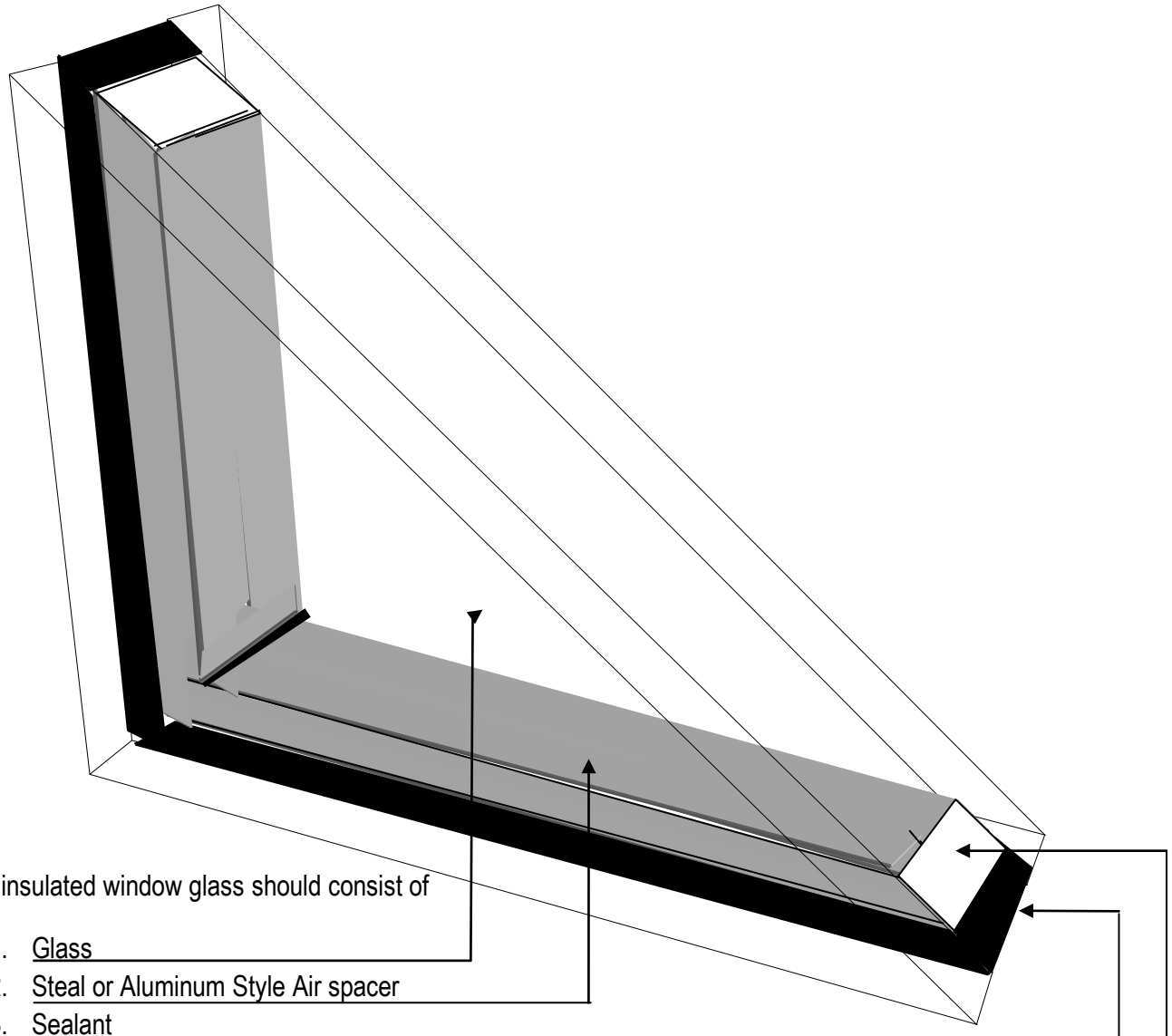
How insulated glass is designed and styles of and air spacers.

The last page shows how and why insulated glass breaks its seal along with the signs that indicate the seal has been broken.

Argon Seal style Insulated Units

This is by far one of the best seals you can get. It is a more expensive by using Argon gas along with a metal reinforced spacer that adds strength to the glass and has been known to stand the test of time without breaking its seal. Most high end style windows companies use this seal and add a 20 year warranty against moisture glass. Companies that use this seal tend to etch the date and logo onto the glass or air spacer. Unfortunately it is used little in lower end windows.

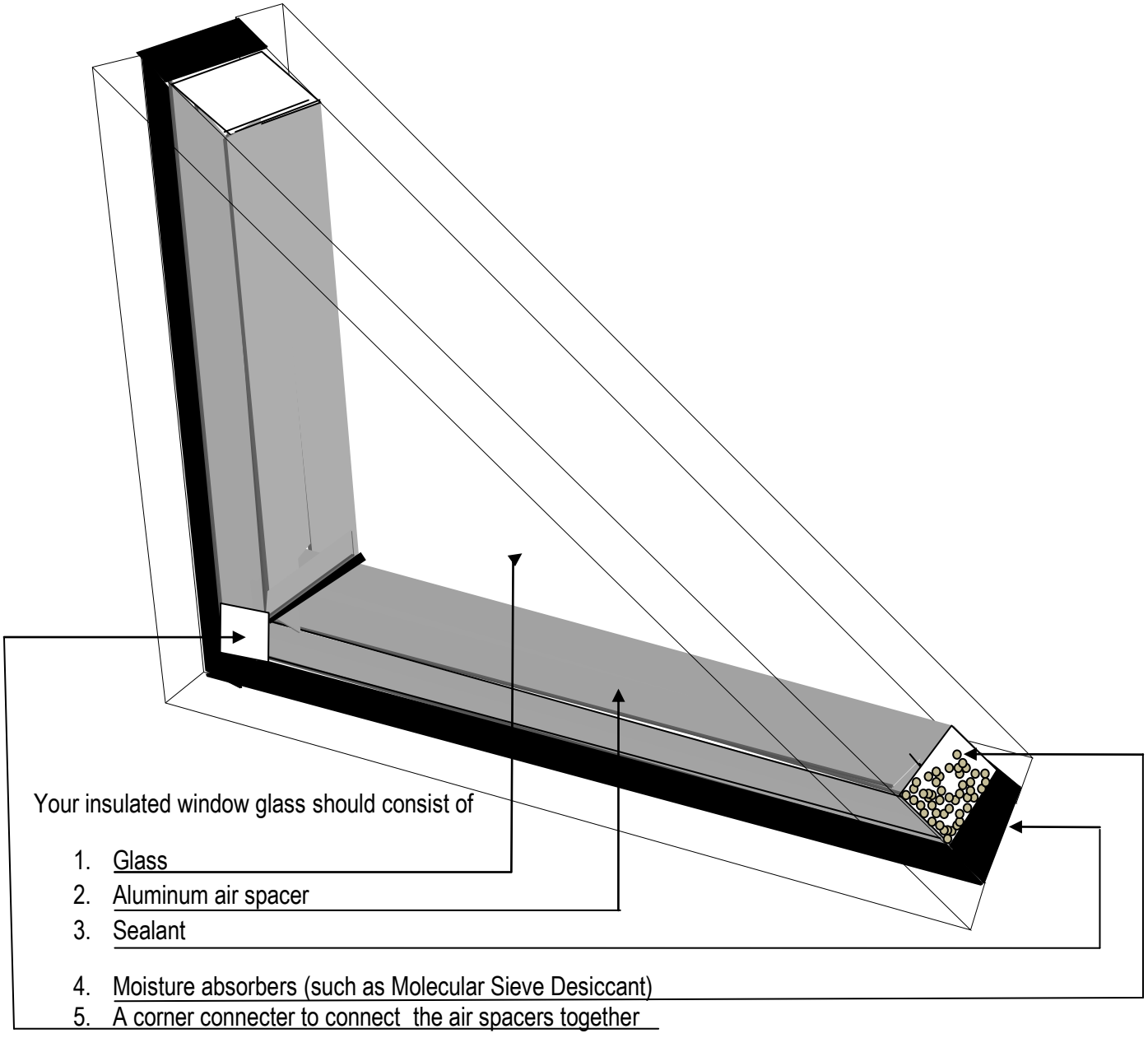


Your insulated window glass should consist of

1. Glass
2. Steal or Aluminum Style Air spacer
3. Sealant
4. No need for moisture absorber the argon gas helps keep the air space from overheating and preserves the integrity of the seal. (Invisible to the eye)

Aluminum air space insulated glass unit.

This is a better choice in airspace with the exception to argon filled units. Companies that use this style tend to stamp a date on the aluminum space giving proof of date of purchase in case of a warranty issue. These units tend to have a 10 year warranty.

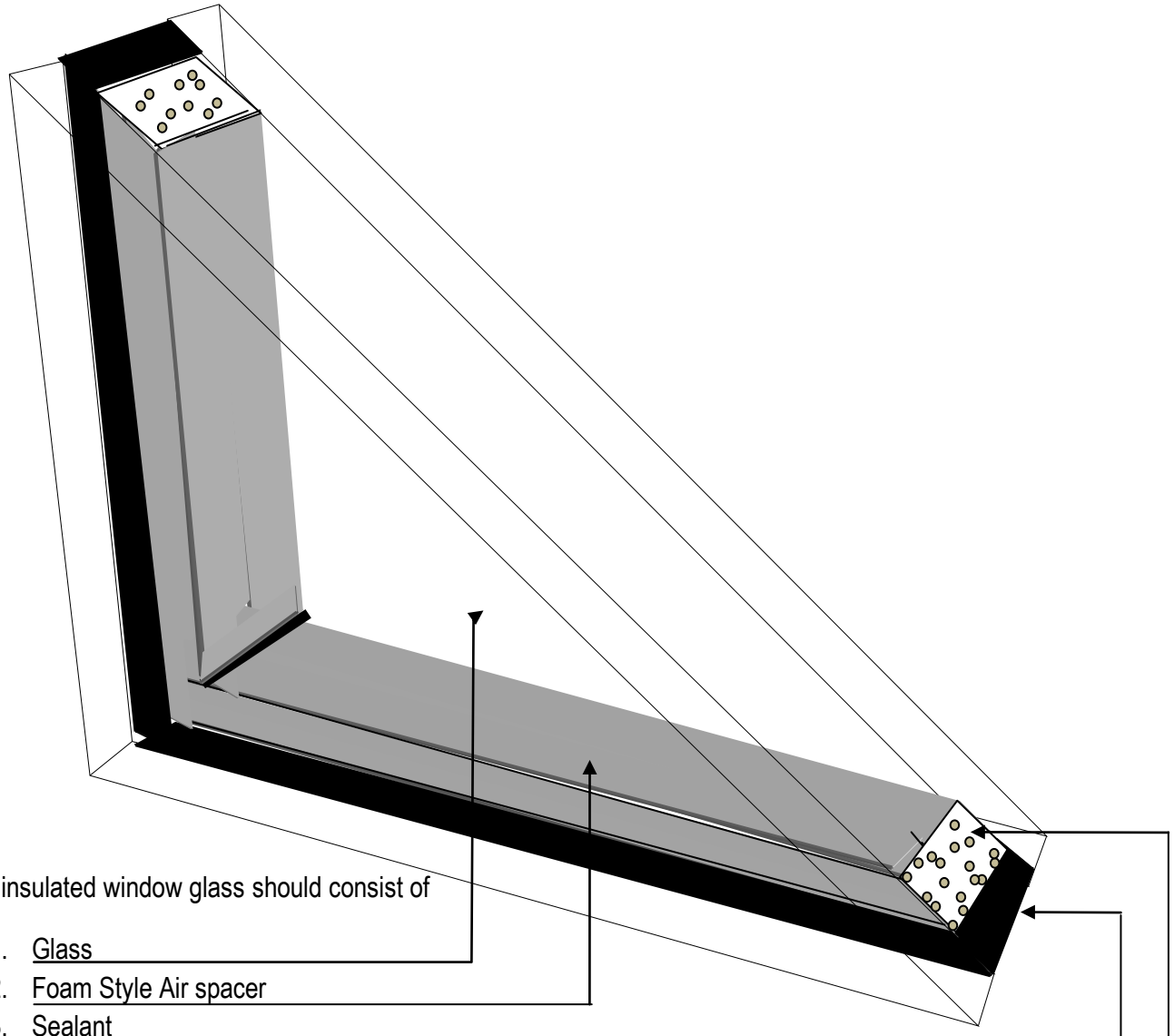


Your insulated window glass should consist of

1. Glass
2. Aluminum air spacer
3. Sealant
4. Moisture absorbers (such as Molecular Sieve Desiccant)
5. A corner connecter to connect the air spacers together

Super Seal air space style insulated units

I am not a big fan of super seal foam compared to Argon filled and Aluminum Airspace. It is a weaker cheaper style of airspace with no metal reinforcement to add little strength to the unit making it easy to break the glass around the edges of the glass unit.
These units tend to have a 10 year warranty.



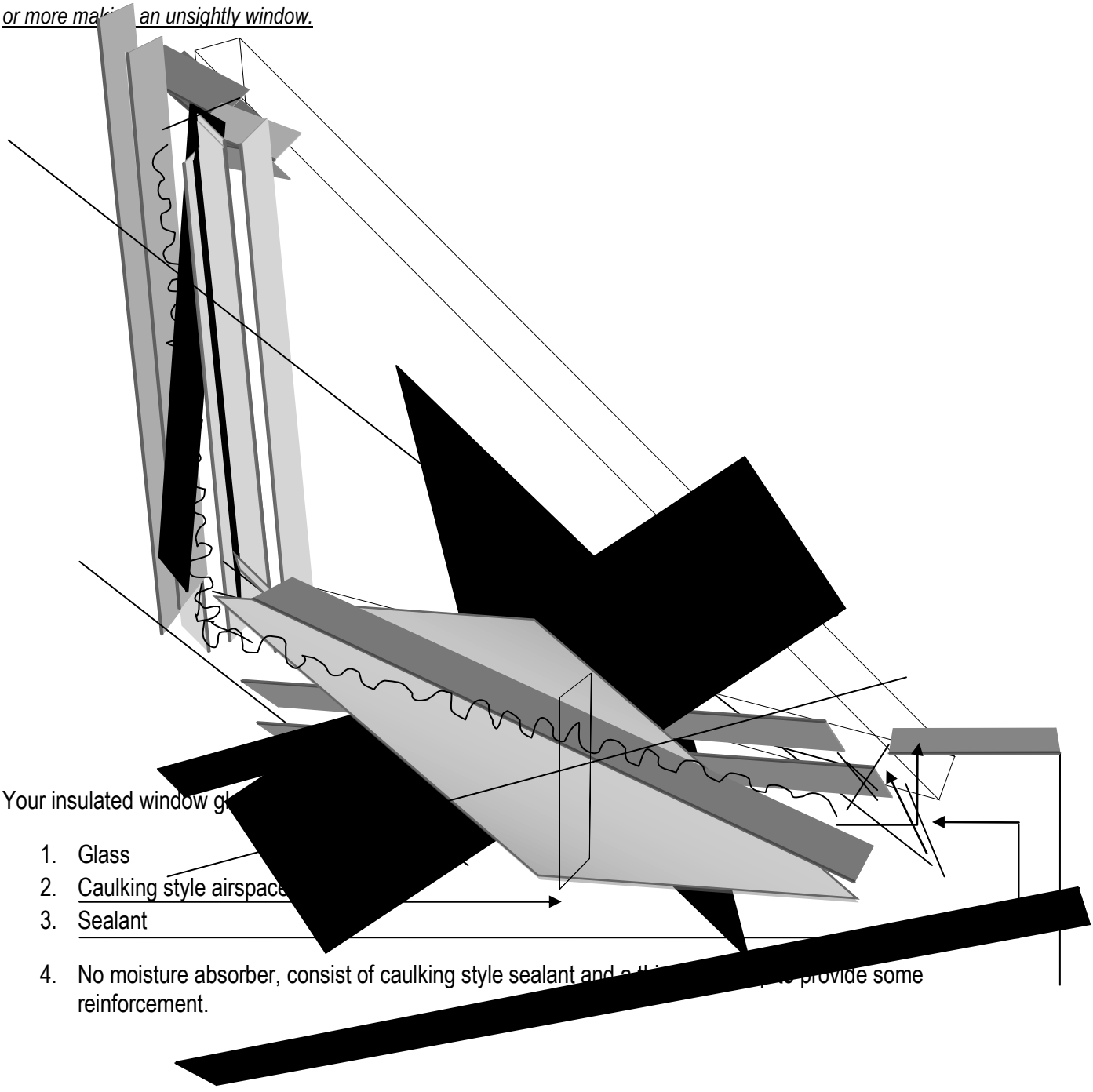
Your insulated window glass should consist of

1. Glass
2. Foam Style Air spacer
3. Sealant
4. Small portion of moisture absorbers put into the foam style airspacer (Molecular Sieve Desiccant)

Swiggle wrap air space seal style Insulated Units

I am not fan of swiggle wrap seal compared to all other style units. It is a weaker cheap style of airspace with little metal reinforcement that adds little strength to the glass making it very easy to break the glass around the edges of the glass. Sealed by using ultraviolet rays. This is a common style seal on cheaper brands of windows. These units tend to have a 10 year warranty.

This style seal has been known to sag into the units given time from outside heat on thicker airspaces such as 1 inch or more making an unsightly window.

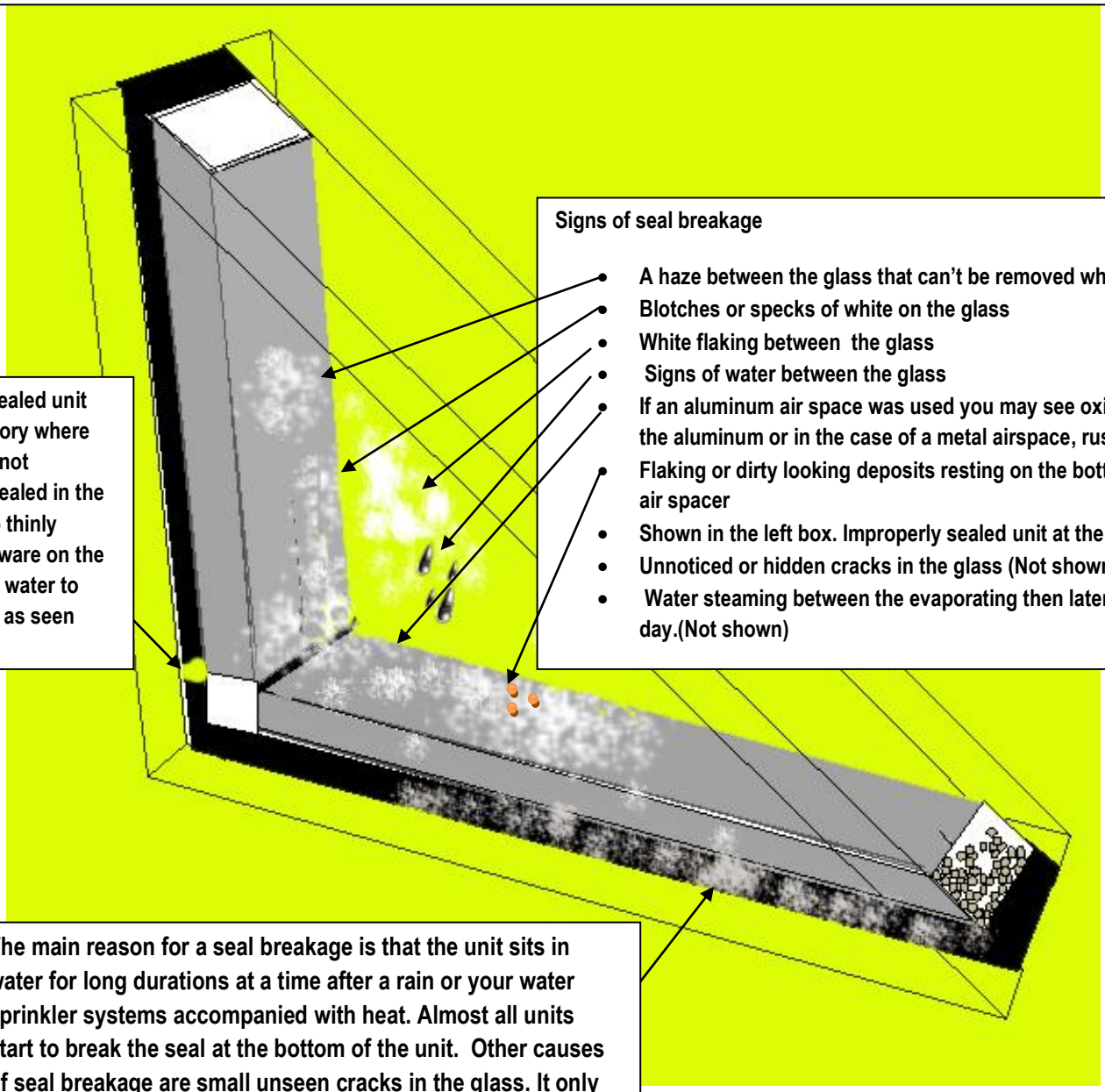


Your insulated window gl

1. Glass
2. Caulking style airspace
3. Sealant
4. No moisture absorber, consist of caulking style sealant and a thi provide some reinforcement.

Signs showing that the insulated seal has broken and how the unit will break its seal.

All natural weather conditions play havoc on the seal but none more-so than high heat accompanied with high humidity or water. Northern portions of the United States do not experience as much moisture glass as the southern regions!



Improperly sealed unit from the factory where the unit was not completely sealed in the corners or to thinly applied else ware on the unit allowing water to seep in such as seen here

Signs of seal breakage

- **A haze between the glass that can't be removed when cleaning**
- **Blotches or specks of white on the glass**
- **White flaking between the glass**
- **Signs of water between the glass**
- **If an aluminum air space was used you may see oxidization of the aluminum or in the case of a metal airspace, rust**
- **Flaking or dirty looking deposits resting on the bottom of the air spacer**
- **Shown in the left box. Improperly sealed unit at the factory**
- **Unnoticed or hidden cracks in the glass (Not shown)**
- **Water steaming between the evaporating then later in the day.(Not shown)**

The main reason for a seal breakage is that the unit sits in water for long durations at a time after a rain or your water sprinkler systems accompanied with heat. Almost all units start to break the seal at the bottom of the unit. Other causes of seal breakage are small unseen cracks in the glass. It only takes a pin size hole to make an insulated unit bad.